11/22/2013 For discussion purposes only

ISB review of science in support of evaluating impacts of flow on fish populations (For discussion at November ISB meeting)

Our goal is NOT to resolve the scientific controversies around impacts of flow on fish populations in the Delta and its tributaries, but rather to examine whether the Delta science community is adequately organized and resources are in place to address these issues in the context of adaptive management.

Purpose of discussion at November ISB meeting: 1) Get ISB feedback on our current plans (specifically the proposed survey), 2) find out if we will have help from a Fellow on this review, and 3) consider whether we should contemplate partially outsourcing these reviews and/or request the assistance of the new ISB member in this effort.

CURRENT PLANS

Audiences for our review: scientists involved, science planners and managers, policy folks

Phases of review work

1. Initial interviews with state, federal, university, and other scientists in June 2013.
2. Collection of information from the science being reviewed. **Need ISB feedback on draft survey** to be sent out (next page), suggestions on to whom this should be sent, and timing. Should we send this out after BDCP comment period (i.e. April)? Request return in a month?
3. At least one of us will attend (probably via web) the workshop on Delta outflows being organized by the Science Program for the SWRCB, which will be February 10-11 (maybe also 12), 2014.
4. Further interviews? Review survey results. Review of the written documents provided. Assign small groups of ISB members to these tasks and ask them to provide reports to the whole ISB.
5. Write report draft with input from entire ISB.
6. External comments.
7. Revise and produce final report with presentation to the Delta Stewardship Council.

Tentative outline for review report

1. Executive Summary
2. Review how Delta flows and fish populations have changed over time, recognizing other stressors in the system
3. Overview of management challenges in the system.
4. Inventory of past scientific studies and approaches used

FINDINGS

5. Inventory of current science efforts regarding impacts of flows on fish populations in the Delta and its tributaries

RECOMMENDATIONS

6. What major scientific issues should be addressed in the context of adaptive management, climate change, and other environmental change?
7. Is the science community organized to address these questions?
8. Conclusions

9. References

10. Appendices on interviews and background submissions

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Proposed request for information

To: Major agencies conducting research on the effects of flows on fish populations in the Delta and its tributaries (**NOTE to ISB and DSP**: please help us compile a list of people to whom this should be sent; include IEP, DWR, SWRCB, CVWQCB, CDFW, FWS, NOAA, SFWCA, …)
From: Delta Independent Science Board
Re: A request for information for a review of scientific work on the effects of flow on fish populations

The Delta Reform Act requires the Independent Science Board to conduct reviews of the science in support of management decisions in the Delta. In response to this legislative requirement, we are currently reviewing scientific efforts regarding the effects of flows on fish populations in the Delta and its tributaries. We recognize that fish populations are affected by many factors other than flow and that flow affects many aspects of the Delta other than fishes, but are trying to limit each review to a manageable size.

Please provide a response to the questions below by DATE. We will use this information as the basis of the review report we will provide to the Delta Stewardship Council and the public. We are hoping to receive brief responses, totaling no more than 5 pages from each agency. Thank you!

1. Current and planned research on flow requirements of fishes in the Delta and its tributaries

a) Please provide us with any existing plan (or link to this plan) for flow-related research in your agency relevant to fish populations.
b) Please briefly describe how this plan fits within the recently completed Delta Science Plan?
c) How does this research account for climate change or other environmental changes?
d) How has modeling been used to structure the research plan?
e) Please send us the **3 most relevant documents** (or links to those documents) resulting from this research in the past 5 years.

We are compiling an overview of agency and other scientific research efforts on the topic and need to know generally what has been happening, how forward-looking these efforts are, their level of internal technical cohesion, and their overall production of insights and information for management and policy.

2. Collaboration, communication, and synthesis

a) Briefly explain how your agency's research activities are coordinated with other agencies and organizations?
b) How are the results of the work used to inform adaptive management and decision-making?
c) How are the results communicated to multiple stakeholder groups and the general public?
d) Briefly, what are the 3-4 major strengths and weaknesses of research relating fish populations to flows?

We are keenly interested in the collective effectiveness of research efforts for providing policy and management insights.

3. Policy and Decisions

a) Briefly, how are priorities established about what research questions to address?
b) What policies drive or constrain the research?